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ABSTRACT

This paper discusses the processes that are at work which produce some of the differences between male and female human beings. The sex of the child is an important attribute of the organism's identity. Before birth, parents express preferences for the sex of the unborn child and start providing names as a function of the sex of the child. Studies of fetal behavior indicate that if the fetus is active, the mother interpreted this as a sign that the child was more likely to be male than female. Before the child is born and after, the parents and community respond to that child in a sex differential fashion. Of concern here is in what way are these early sex differential parental behaviors transmitted to the child and what kinds of infant behaviors are a consequence of them? In the subsequent discussion in this paper, an attempt is made to demonstrate that in many aspects of the child's behavior there are early and profound differences in the infant's behavior as a function of its sex. For the first few months of life, boys receive more proximal behavior than do girls; however, by six months of age, this has reversed itself. By the end of the first year of life, girls touch and stay close to their mother significantly more than do boys. One method of socializing the young child is to turn the infant to a position facing away from and not touching the mother. The data indicated that in our society women have more freedom of action and more available choices in social interpersonal relationships. (CK)

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Sex Stereotypic Behavior in Infants: An Analysis of Social-Interpersonal Relationships

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In any discussion of sex differences, it is necessary to remember that sex in itself is not a psychological variable. The same, of course, is true of cultural or social class differences. Both sex differences as well as social class and culture are carrier variables in which meaningful psychological phenomena may be found. While this is a simple truth, it is often forgotten in the excitement of demonstrating differences among peoples. Contemporary psychology--often in terms of the problems posed and the statistical logic employed--is concerned with demonstrating individual (or group) differences. The philosophy of science does not dictate this. Just as revealing would be a psychology in which we seek to find ways in which people are similar and what manipulations can cause similar performance. Sex, social class and culture currently are used to explain differences rather than treat them as media which provide the variability necessary to help pinpoint the processes at work. Psychological concepts and processes must be observed within these carrier variables. There is, however, no guarantee that individual differences will appear within these different groups, nor for that matter should investigation cease at the demonstration of these differences. It is the processes which produce these differences which are at the heart of scientific inquiry.

This discussion is not concerned with demonstrating how boys are different from girls--either better or worse--but merely what are the processes that are at work which produce some of the differences observed between male

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and female human beings. In addition, no attempt will be made to resolve whether the differences between the sexes are learned or determined by basic biological disposition; the issue of biological versus differential experience is far too complex to tackle here. One reason for this complexity is that very early in the child's life the parents behave in a sex differentiated fashion; boy children are responded to in one way and girl children in another. This suggests that sex differences subsequently observed are likely to be consequences of differential experience. However, it is also clear that at very early ages girl and boy infants respond differently to certain kinds of experience. That this differential responding may be a function of some biological difference is not to be ignored. As will be discussed subsequently in greater detail, girl infants are talked to more than boy infants at very early ages (Lewis, 1971; Moss, 1967). This might explain differential language acquisition for it is known that girls show precocious development vis à vis boys. However, we also know that girl infants respond more to auditory signals than do boys (Baumel & Lewis, 1971). Girls may be spoken to more because they are more responsive to the stimulation. This would suggest that there are some basic biological differences accounting for differential experience. The following remarks, therefore, concern themselves more with what we observe happening in the life of the very young child as a function of its sex. We must leave for later the issue of the relationship between experience and biological disposition. In a real sense, not enough information is available to answer this type of question.

The sex of the child is always an important attribute of the organism's identity. Long before birth, parents start to discuss their preference for the sex of the unborn child and start providing names as a function of the sex

of the child. Before knowing how big it will be, what kind of personality it will have, whether it will be healthy or not, the first and primary attribute of the child which parents attend to is labeling it as a function of its sex. Even as a fetus, mothers respond to the fetus' behavior in a sex determining way. Several years ago we undertook some studies of fetal behavior in the last trimester of pregnancy (see Sontag, Steele & Lewis, 1969). It was our impression--no data were directly obtained--that mothers responded to the activity of her fetus in a sex appropriate fashion. If the fetus was active, kicking and moving a great deal, the mother interpreted this as a sign that the child was more likely to be male than female. This may be the earliest example of how anticipation or prediction about the sex of the child is tied to some of the behavior characteristically assigned to one sex or another. In terms of general observation of people's behavior, most of us are familiar with the extent and intensity of methods used to predict the sex of the infant. These vary from the more scientific notions of the time of copulation in relationship to ovulation, to the "old wives' tale" of how the child lies in the mother's womb, that is, the notion of carrying the baby "high" or "low" being predictive of the child's sex.

These then are just some examples of the kind of preoccupations parents have with the sex characteristic of their unborn child. Certainly parents concern themselves with other characteristics, such as whether or not the child will be physically and mentally sound. However, parents' attitudes toward the fetus usually center on the specific characteristic of the sex of the child. This kind of exaggerated concern may, of course, reflect some cultural need, concern and/or value system.

This concern manifests itself most obviously from birth on. At the time of birth the first characteristic of the infant attended to is its sex, then its physical health. While it is true that sex is one of the most obvious characteristics of a just-born child, the continued preoccupation with its sex is not reasonable. Data on the just-born and newborn indicate that there are many other characteristics of the infant which can be used to describe it. However, the sex of the infant remains most dominant. All birth announcements provide the sex of the child and other physical attributes such as how much it weighed, etc. Not mentioned is whether the infant, for example, sleeps well, is alert, or whether it seems to be easily irritated. These characteristics, which also become obvious within a few days, are not the kind of information which we transmit.

To summarize, from what we know of common experience it is apparent that even before the child is born, and certainly after, parents, friends and community respond to that child in a sex differential fashion. The characteristic most attended and responded to is the sex of the infant. Perhaps this is best characterized by the exclamation of the newborn's parent when he/she says, "I have a girl (boy)," not, "It's a healthy baby."

What must be of concern to those interested in psychological processes is to determine the consequence of these parental behaviors. More to the point, in what way are these early sex differential parental behaviors transmitted to the child and what kinds of infant behaviors are a consequence of them? What we hope to accomplish in the subsequent discussion is to demonstrate that in many aspects of the child's behavior--personality, social and cognitive development--there are early and profound differences in the infant's behavior as a function of its sex. In the following discussion, we shall concentrate

on the specific domain of interpersonal relationship--specifically the mother-infant dyad--because it is clear that this one aspect is fundamental to the whole subsequent range of human behavior subsumed under the taxonomy of personality and social development. The effect of this dyad on cognitive development is also to be found (Lewis & Goldberg, 1969) but for this essay will be foregone.

Dependency and attachment are two widely discussed aspects of early human interaction. While there is controversy in the literature as to exactly what are the processes which elicit and maintain interpersonal relationships, both concepts have to do with the infant's relationship to its mother and other significant caretakers. Neither dependency nor attachment theory is really suitable in describing the mother-infant relationship but for the sake of this paper, I would prefer to use the term attachment. Ainsworth's (1964) definition is quite adequate: "attachment behavior is behavior through which a discriminatory, differential affectional relationship is established with a person or object...." Schaffer and Emerson (1964) state that attachment "is the tendency of the young to seek the proximity of certain other members of the species." These definitions complement each other and have much in common; they each suggest that both parent and infant act on one another; that is, both infant and parent become attached to each other.

Parental behavior in the service of attachment varies as a function of the sex of the infant. A series of studies undertaken will be described to demonstrate these sex related behaviors. Rather than present each study and the results (this would be repetitive since most of them have been presented elsewhere), we will present a description of the kinds of situations in which data are gathered and a summary of the results follow. The reader interested

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in the original reports should consult the following papers: Lewis and Goldberg, 1969; Goldberg and Lewis, 1969; Messer and Lewis, in press; Lusk and Lewis, 1971; Ban and Lewis, 1971; Lewis and Ban, 1971; Lewis, 1971.

Generally, the mother and infant are studied; an exception to this is the recent study by Ban and Lewis (1971) in which fathers as well as mothers and their infants were studied. The first situation, used for younger infants (in the first 12 weeks of life) involves going into the infant's home and observing the kinds of infant and maternal behaviors. For example, such maternal behaviors as looking at, talking to, holding, touching and smiling are recorded as well as infant behaviors of vocalization, smiling, moving and playing. Each 10 seconds an observer records what infant and mother behaviors have occurred and which behaviors follow or instigate other behaviors (see Lewis, 1971 for a full description).

When the infant is a year old or older, another setting is used to observe his behavior; this is best described as a free play situation. The mother and infant are placed in a room filled with toys and the infant's behavior toward his mother is recorded. Four major behaviors are recorded: amount of vocalization, looking at, touching and proximity seeking (see Goldberg & Lewis, 1969 for a full description).

A useful classification for the matrix of parent behaviors directed toward their infants and the matrix of infant behaviors directed toward their parents is to divide these behaviors into proximal and distal behaviors. Proximal behaviors are those which have to do with touching, holding and rocking, in general, behaviors which involve physical contact. Distal behaviors are those behaviors such as looking at, smiling and vocalizing to, behaviors which can be performed at a distance. These behaviors also are contact behaviors, but this contact is

not as direct and physical as the others. For example, the mother remains in contact by talking to her child when she leaves the room. While contact is maintained, it is clearly different from touching the infant. In both cases, the mother interacts with her infant; however, in one, the interaction (or bonding) is through distal behavior, in the other, proximal.

Observation of parents' behavior toward their infants from the earliest ages--within the first three weeks of life (see Moss, 1967) or older, for example, within the first twelve weeks (see Lewis, 1971)--reveals that the types of parental attachment behavior directed toward the infants varies as a function of the infants' sex. For example, it has been repeatedly found that from the earliest age, mothers look at and talk to their girl infants more than they do to their boy infants. In fact, looking at and talking to behaviors are greater for girls over the entire first two years of life. Thus, the maternal distal mode of behavior is greater toward girls than boys.

The proximal mode--touching, holding, rocking, kissing, etc.--is somewhat more complicated. For the first few months of life, boys receive more proximal behavior than do girls; however, by six months of age, this has reversed itself: girls receive more proximal behavior than boys. By six months of age, and for the next year or two, girls receive more proximal and distal behavior than boys.

Obviously, what the parent does to the infant, the infant is likely to do back. This is, in fact, the implicit intention of this kind of parental behavior. It reflects an important socialization process which is being taught differentially as a function of the child's sex. It would appear that the major socialization process, in terms of attachment or social behavior, is to move the infant from a proximal mode of social interaction to that of a distal

mode: the former an infant mode while the latter an adult mode of interaction. For example, the face to face, frontal bodily contact between the infant and his mother must eventually be replaced by the visual gaze interaction of the adult. The child is moved from a close physical contact with its social world to an essentially visual contact with its world. This socialization process is carried out and for the most part, completed within the first two years of life. Moreover, we have noticed a difference in the speed of this socialization process as a function of the sex of the child. The data suggest that boys are moved faster from the proximal to the distal form of social relation. By the end of the first year of life, girls touch and stay close to their mother significantly more than do boys. Data in the free play situation described earlier indicate this sex difference: female infants at a year of age are allowed, encouraged and spend significantly more time touching and staying in close proximity to their mothers than are males. This is not to say that girls are not socialized away from the proximal mode of behavior--they are--but they are being encouraged to move away at later ages. For example, it is not until two years of age that a decline in girls' proximal behavior is observed. Moreover, we suspect that within our culture the socialization from proximal to distal behavior is never as severe for girls.

Observation of the methods of socializing young children to employ distal rather than proximal forms of behavior are informative. Many differing methods are used. One widely used method is to turn the infant from a face to face proximal position to a face to back position--the infant facing away from and not touching the mother. This is accomplished with an easy turning motion and usually appears gentle in tone. A further technique is to attract the attention of the infant away from the mother by pointing out or suggesting the infant play with some object.

The following is an excerpt from a protocol of a year-old boy and his mother. This mother was particularly interested in developing autonomy in her son:

Walking now with both toys. In square 6. Drops the lawnmower. Squats in square 6. Vocalizes to mother. Looks around room. Mallet in his right hand. Standing now in square 7. Goes to mother. Touches her. (15 seconds)

Turns from her and walks away. Smiling. In square 6. Trips and falls. Now in square 7. Going toward mother. She is touching his head. He is touching her. (30 seconds)

She throws the dog and cat far from her. He looks. He smiles and goes toward them. In square 3, now square 2, square 1. Picks up the cat. Has mallet in right hand. Going toward the mother. Drops the cat. (45 seconds)

In square 4. Leans against mother. Looks up at her. Mallet in right hand. She vocalizes to him. She turns him around. He is facing away and smiling. Mallet in right hand. (60 seconds)

Goes to square 3. Picks up the cat. Goes to mother again. Drops cat and goes to mother and leans against her. Looks up at her. Mallet in right hand. She turns him around. (75 seconds)

This was just 75 seconds in a 15-minute protocol but it demonstrates the type of socialization technique which mothers employ, especially toward their sons. It should be pointed out that fathers' behavior toward their children show similar types of behavior as a function of the sex of their infant (Ban & Lewis, 1971). In this particular situation, the mother both turns her son from her as well as distracts him from her by throwing a toy far from her and suggesting by this action (sometimes explicitly) that the child get it.

It appears from our observations of the interaction between parent and child, that boys are usually quickly moved from a proximal form of interaction in our society. Within the first six months the high degree of physical proximity which the mother directs toward her infant boy is reversed. Why the mother initially touches the boy more than the girl is a difficult question. There are, however, several alternatives: (1) boys are more valuable to the

mother than girls; (2) boys are more fretful and upset at birth than girls; (3) boys quiet more to physical stimulation than do girls, while girls quiet more to auditory stimulation than do boys. Each of these three possibilities deserves investigation. At this point it is not possible to determine which is responsible. It should be noted, however, that newborn boys, in fact, do cry more than girls, possibly as a consequence of a more severe traumatic birth experience which occurs more frequently to boy than to girl infants. Whatever the reason(s), that boys are initially touched more often than girls, by six months of age this has ceased to be the case. We cannot be certain as to why this occurs; however, comments from mothers as well as our own observation leads to the suspicion that the motive of autonomy or independence may play a role. As a function of societal stereotypes, mothers believe that boys rather than girls should be independent and encouraged to explore and master their world. This is antithetical to proximal behavior--in fact it may be antithetical to all close interpersonal relationships. As this becomes an increasingly relevant motive, mothers start to wean their sons from physical contact with them.

The studies from which these data were obtained are too recently completed to be able to clearly state their consequences in terms of adults' social patterns. It is possible, however, to discuss some sex difference in terms of adult interpersonal relationships and determine the likelihood that, in fact, these may be caused by this very early differential socialization process. In the American society at large, and especially in the Puritan aspect of that culture which usually is defined as its principal component, we find that men and women are allowed considerably different degrees of freedom in terms of proximity in interpersonal relationships. In general, for

men in our culture, proximity (touching) is restricted to the opposite sex and its function is primarily sexual in nature. That is to say, men are allowed to touch women usually for sexual reasons only and, in general, are not allowed to make physical contact with other men. That does not mean to say that men, in fact, don't make physical contact with other men. But the times and situations are highly prescribed. In great excitement, at a football game, for example, men are allowed to embrace and hug other men. In extreme emotional distress, as in the case of combat when one man collapses in the arms of another man, contact between men is also accepted. However, even this is looked upon as somewhat unusual. In general, men are only touched by other men if a prescribed service such as barbering or doctoring is being performed. Even then the contact is not to be enjoyed: gooseflesh from a barber's touch is embarrassing. Male contact with women is almost never without sexual overtones, with the exception of contact with females at either age extreme. While women in our culture are restricted in their proximal behavior toward men, they are allowed much more contact with other women. They may embrace each other or even dance together. It is not unusual to see teenage rock television programs where girls are dancing together. It would be strange to see two boys dancing together! This is equally true for older people; two aunts dancing together would be considered quite normal, whereas two uncles dancing together would not be. The list of sex differences in approved contact between people of the same sex is extensive; however, it can be expanded to the general differences in prohibition in physical contact. Consider the sex differences in the amount of physical contact allowed toward children. It is highly appropriate, indeed incorporated in the feminine ideal, for women to touch children. It is less appropriate and much less in the masculine

ideal, for men to do this. We have been analyzing amounts of contact, but it should not escape the reader that the nature of the contact may be equally important. Here, too, sex differences are obvious: women not only touch more, but their touching is more gentle. When a man does touch, he is expected to touch firmly. Thus, even in those situations where both men and women can touch, there is still a difference in their behavior.

It is important to note that we have been talking about a society in some unitary sense. In any discussion of society, especially in a culture where the social structure is as diverse as our own, it is important to keep in mind the diversity of subcultures within the society. While this sex stereotype may be true for large segments of the culture and are generally reflected in the mass media, these stereotypes are not to be found universally throughout our culture. For example, among the Italians, Greeks, or Jews, the amount of physical contact between men appears to be greater than general. Observation of the behavior of peoples from these kinds of cultural groups supports the notion that proximal behavior toward boy infants is culture specific. Moreover, since adult males engage in more same sex contact, it would strongly suggest that the relationship between infant socialization practices and adult behavior is more than casual. Obviously, we have implied it is directly related. Excluding long term longitudinal study, cross cultural investigation of differences in infant handling and adult practices is the best way to confirm these hypotheses.

To summarize what we have learned in the last few years in terms of attachment behavior suggests that children are moved from a proximal to a distal relationship in which visual regard becomes one of the prime modes of social interaction. Because of differential concern for autonomy as a function

of the sex of the child, boy infants are moved more rapidly from proximal to distal forms of attachment behavior. Girls in this society are also moved along this continuum of social interaction, though less rapidly. By two years of age, a girl shows the same pattern which has emerged a year earlier for boys. Moreover, the data suggest that the socialization is undertaken less intensely for girls than boys. The consequences of this early differential socialization is seen in adult behavior. We believe that these early sex differences are reflected in the social interaction of adult members of our society. In general, women are allowed more proximal behavior with other members of the society, both adults and children, whereas men are restricted in their proximal behavior. Finally, even when both sexes are alllowed proximal behavior, men are required to be less gentle and, in general, to express less feeling.

What does this mean in terms of comparing men and women? Is there something in these findings which is relevant for the women's liberation movement? In part, they seem to indicate that in social interpersonal relationships, women in our society have more freedom of action and more available choices. It is important to emphasize that this analysis is only generally true; the exceptions, and there are many, usually center around action (such as going out by oneself) rather than feeling. What is meant is that women don't wish to be with one another but rather they can't be "at large" without men. The one major obstacle in women's expression of this socialized advantage is the feeling of self hate common to all groups who feel powerless. Thus, many women are contemptuous of other women, which confounds their basic ability--the differential advantage of being allowed contact and feeling.

In this discussion, proximal behavior and feeling have been viewed as positive goals. While their positive valence would seem obvious to some, our society in general does not view them as such. Thus, it is not out of generosity that women are allowed these characteristics. In a society where competition is extremely important, proximal and feeling behaviors may be disadvantageous. Individuation, the benchmark of a competitive society, is antithetical to group behavior; proximal and feeling behaviors are by definition communal rather than individual activities.

One could argue, therefore, that it is not a case of a society allowing these values to women but preventing men from having them. People are becoming aware of this. Perhaps it is no accident that the new social movement combines both a rejection of the masculine ideal (competition, etc.) and a desire for more proximal and feeling interactions. Knowing this, the goal of people interested in feeling and group interaction must move toward embracing the feminine ideal--the feminization of society rather than its masculinization.

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Footnote

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